APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,519	10/26/2001	Sven Graupner	10010927-1	3403

EXAMINER
AVELLINO, JOSEPH E

ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 09/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
	10/046,519	GRAUPNER ET AL.
Office Action Summary	Examiner	Art Unit
	Joseph E. Avellino	2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 September 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is

     closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1,2,4-10,12 and 14-18</u> is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1,2,4-10,12 and 14-18</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some *   c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage

         application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date <u>5/6/02</u>.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

1.   Claims 1, 2, 4-10, 12, and 14-18 are presented for examination; claims 1, 14, and

15 independent. The Office acknowledges the cancellation of claims 3, 11, and 13.

Terminal Disclaimer

2.   The terminal disclaimers filed on August 31, 2005 disclaiming the terminal

portions of any patent granted on this application which would extend beyond the

expiration date of Application nos. 10/046,516, 10/044,882 and 10/164,554 have been

reviewed and is accepted. The terminal disclaimers have been recorded.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

4.   Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with

the enablement requirement. The claim(s) contains subject matter which was not

described in the specification in such a way as to enable one skilled in the art to which it

pertains, or with which it is most nearly connected, to make and/or use the invention.

The claim recites a complete search process optimization method, which is not

discussed anywhere in the specification. The specification does recite using a

simulated annealing process, which, as is known in the art, different than a complete

search process. Applicant is requested to change "complete search process" to a

"simulated annealing process". If this is an oversight by the Office, Applicant is invited

to point out specifically where in the specification it can be found that the optimization

method can be a complete search process.

Claim Rejections - 35 USC § 103

5.   The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

        Claims 1-3, 6, 7, 12, 14, and 15 are rejected under 35 U.S.C. 103(a) as being

unpatentable over (US 2003/0051236) (hereinafter Pace) in view of Ouimet (US

2002/0107819).

6.   Referring to claim 1, Pace discloses a computer-implemented method for

optimizing allocation of computer resources, comprising

        establishing a plurality of server models (i.e. target node classes), each server

model including one or more server nodes (i.e. those which reflect geographic, logical,

business category-based and or any other general class relationships), wherein each

server node has an associated a set of capacity attributes (an inherent feature since

every server has attributes regarding its capacity, and therefore every class of target

nodes has an associated set of capacity attributes) (p. 19, ¶ 306);

        establishing a plurality of service models (i.e. system parts classes), each service

model including one or more service nodes (i.e. reflect technical requirement, business

purpose or any other general class relationships), wherein each service node has an associated a set of demand attributes (an inherent feature since metrics are returned p. 53 ¶ 808, which inherently requires that demands regarding the application must be there) (p. 19, ¶ 307); ·

selecting one of a plurality of user-selectable objective functions, wherein each of the objective functions evaluates a solution as a function of the demand and capacity attributes (i.e. asset allocation)(p. 53, ¶ 808-811);

generating an optimized mapping of service nodes in a user-selected service model to server nodes in a user-selected server model as a function of the demand and capacity attributes (the models are inherently user selected since the models must be created somehow based on characteristics stated in Pace, and therefore a network administrator would have to define those classes in some fashion) (p. 53, ¶ 808-811).

Pace does not specifically state selecting in response to user input one of a plurality of user-selectable optimization method. Ouimet discloses another computer-implemented method for optimizing allocation of computer resources which discloses selecting in response to user input one of a plurality of user-selectable optimization method (p. 5, ¶ 71). It would have been obvious to one of ordinary skill in the art to combine the teaching of Ouimet with Pace since Pace does not specifically disclose as to how these objective functions are able to calculate and determine where the asset allocations are to be distributed. This would lead one of ordinary skill in the art to find ways in which allocations can be optimized, eventually finding Ouimet and its method which can be used with the network optimization models of Pace in order to allow the

user to select several optimization methods and to compare the results obtained by

using a variety of methods on the same data set as supported by Ouimet (p. 5, ¶ 71).

7.   Referring to claim 2, Pace in view of Ouimet discloses the invention substantively

as described in claim 1. Pace in view of Ouimet does not disclose normalizing the

capacity attributes of server nodes and demand attributes of service nodes. However it

is well known that normalization of values is a simple statistical process that is done in

order to obtain a base reference to interpret values resulting from heterogeneous

entities. Therefore it would have been obvious to one of ordinary skill in the art to

modify the teaching of Pace in order to include normalization of values in order to

interpret values from different server and service nodes, and interpret these values in

order to generate an optimized values taken with respect to their relationship with one

another, thereby providing a more effective model of the service and server nodes and

classes of nodes since Pace discloses that there are heterogeneous entities in the

network (Figure 1G) which all contain different processing powers, it would be beneficial

to one of ordinary skill in the art to correlate these values in order to get a baseline

reference on which to interpret these attributes and metrics.

8.   Referring to claim 3, Pace in view of Ouimet discloses the invention substantively

as described in claim 1. Pace in view of Ouimet further disclose the plurality of

optimization methods include a genetic process and a complete search process

(Ouimet, p. 5, ¶ 71). It would have been obvious to one of ordinary skill in the art to

combine the teaching of Ouimet with Pace since Pace does not specifically disclose as to how these objective functions are able to calculate and determine where the asset allocations are to be distributed. This would lead one of ordinary skill in the art to find ways in which allocations can be optimized, eventually finding Ouimet and its method which can be used with the network optimization models of Pace in order to allow the user to select several optimization methods and to compare the results obtained by using a variety of methods on the same data set as supported by Ouimet (p. 5, ¶ 71).

9.   Referring to claim 6, Pace discloses the plurality of objective functions includes a first function for quantifying a balance processing load between nodes and a second function quantifies a transport demand (i.e. QoS) between the nodes (p. 53, ¶ 808-825).

10.   Claims 7, 12, and 15 are rejected for similar reasons as stated above.

11.   Claim 14 is rejected for similar reasons as stated above.

        Claims 5, 8-10, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pace in view of Ouimet in view of Hauser et al. (USPN 5,889,956) (hereinafter Hauser).

12.   Referring to claims 5 and 8, Pace in view of Ouimet discloses the invention substantively as described in claim 1. Pace furthermore inherently discloses

establishing one or more service-node relationships between selected pairs of the

service nodes, and establishing one or more server-node relationships between

selected pairs of the server nodes, since any hierarchical relationship would have a

reference to its parent and child level. Pace does not specifically disclose that the

service-node relationships are demand attributes, the server-node relationships are

capacity attributes, and generating an optimized mapping as a function of the service-

node relationships and server-node relationships. In analogous art, Hauser discloses a

hierarchical resource management system which discloses a service node model

relationships (i.e. between the users of the programming department 22 and the

engineering department 16) are demand attributes (i.e. a user of the lower level 22

requests resources of the system, which can be considered a demand attribute) (e.g.

abstract; Figure 1). Hauser further discloses the hierarchical resource management

system can also have capacity attributes for the server nodes (i.e. the computers

encompassed by the programming department 22 and the engineering department 16

since each level has an associated "Maximum_Allowed" value which determines the

capacity of the resource for the department) (e.g. abstract). Hauser furthermore

discloses generating an optimized mapping as a function of the service node

relationships and server node relationships (if a user has not met his

"minimum_guaranteed" value of resource, the system is optimized and extra capacity is

taken from another department, 18 for example, and applied to the user, thereby

providing an optimization between the service relationships and the server

relationships). It would have been obvious to one of ordinary skill in the art to combine

the teaching of Hauser with Pace since Pace discloses that load balancing models are

well known in the art, this would motivate one of ordinary skill in the art for other

methods of resource management, eventually finding Hauser and its use of Maximum

allowed values, and minimum guaranteed values (e.g. abstract).

13.   Referring to claims 9 and 10, Hauser in view of Pace disclose the invention

substantively as described in claim 7. Pace does not disclose the service node has a

set of capacity attributes and optimizing mapping between the capacity attributes of the

two levels. Hauser discloses that when a lower level 22 demands use of a resource,

the higher level 16 checks to make sure it is below its "maximum allowed" level, thereby

inherently having a capacity attribute (e.g. abstract; col. 3, line 66 to col. 4, line 19).

Furthermore Hauser discloses that a lower level resource can demand more from a

higher level such that it does not meet its "minimum guaranteed" value (e.g. abstract;

col. 4, lines 20-40). When these teachings are applied to both the service-model nodes

as well as the server-model nodes, they teach the limitations of the aforementioned

claims. It would have been obvious to one of ordinary skill in the art to combine the

teaching of Hauser with Pace since Pace discloses that load balancing models are well

known in the art, this would motivate one of ordinary skill in the art for other methods of

hierarchical resource management, eventually finding Hauser and its use of Maximum

allowed values, and minimum guaranteed values (e.g. abstract).

14.   Claims 16-18 are rejected for similar reasons as stated above.

Response to Arguments

15.   Applicant's arguments with regard to the limitations of claim 3 which has been

incorporated into the independent claims, has been considered and persuasive,

however a new rejection has been formulated.

16.   Applicant further argues, in substance, that (1) Hauser does not teach that the

programming department has a quantity of communication resources required for

communication between the programming department and engineering department, and

(2) the motivation is improper to combine Hauser with Pace since no evidence has been

presented to indicate any deficiency or need of Pace would be satisfied by a specific

teaching of Hauser.

17.   As to point (1) Applicant's rationale is incorrect. Applicant will find in the abstract

that the programming department requests a demand for a quantity of communication

(i.e. programming department requests resources to the system), the programming

department requests the allocation from the engineering department, which then

determines if enough resources are available from the company. Applicant can

appreciate that this is disclosed in col. 5, lines 20-46 and Figure 3. By this rationale, the

rejection is maintained.

18.   As to point (2), the examiner recognizes that obviousness can only be

established by combining or modifying the teachings of the prior art to produce the

claimed invention where there is some teaching, suggestion, or motivation to do so

found either in the references themselves or *in the knowledge generally available to one*

of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir.

1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it

would have been obvious to one of ordinary skill in the art to combine the teaching of

Hauser with Pace since Pace discloses that load balancing models are well known in

the art, this would motivate one of ordinary skill in the art for other methods of resource

management, eventually finding Hauser and its use of Maximum allowed values, and

minimum guaranteed values (e.g. abstract). By this rationale, the rejection is

maintained.

Conclusion

19.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

20.   Applicant has failed to seasonably challenge the Examiner's assertions of well

known subject matter in the previous Office action(s) pursuant to the requirements set

forth under MPEP §2144.03. A "seasonable challenge" is an explicit demand for

evidence set forth by Applicant in the next response. Accordingly, the claim limitations

the Examiner considered as "well known" in the first Office action, i.e. normalizing

attributes, are now established as admitted prior art of record for the course of the prosecution. See In re Chevenard, 139 F.2d 71, 60 USPQ 239 (CCPA 1943).
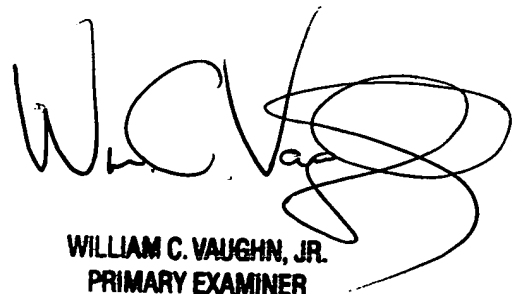
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph E. Avellino whose telephone number is (571) 272-3905. The examiner can normally be reached on Monday-Friday 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JEA
September 15, 2005

WILLIAM C. VAUGHN, JR.
PRIMARY EXAMINER